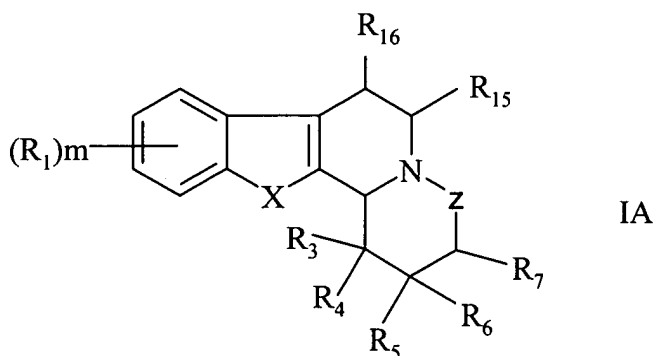


AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-39. (Canceled).

40. (New) A compound of formula IA:



wherein,

X is O or S;

Z is -CHR₈-;

R₁ is chosen from hydroxy, (C₁-C₆)alkyl, (C₁-C₆)alkoxy, halogen, halo(C₁-C₆)alkyl, (C₁-C₆)alkoxy-CO-, CN, NO₂, NH₂, mono- or di(C₁-C₆)alkylamino, and carboxyl;

R₃ is chosen from hydroxy, (C₁-C₆)alkyl, (C₂-C₆)alkenyl, hydroxy(C₁-C₆)alkyl, (C₁-C₆)alkoxy, (C₁-C₆)alkoxy(C₁-C₆)alkyl, hydroxy(C₁-C₆)alkoxy(C₁-C₆)alkyl, (C₃-C₇)cycloalkyl, (C₃-C₇)cycloalkyl(C₁-C₆)alkyl, aryl, aryl(C₁-C₆)alkyl, aryloxy, aryl(C₁-C₆)alkoxy, aryloxy(C₁-C₆)alkyl, aryl(C₁-C₆)alkoxy(C₁-C₆)alkyl, halo(C₁-C₆)alkyl, NH₂, amino(C₁-C₆)alkyl, mono- or di(C₁-C₆)alkylamino, mono- or di(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₁-C₆)alkyl-CO-, (C₁-C₆)alkyl-CO-O-, (C₁-C₆)alkyl-CO-O-(C₁-C₆)alkyl, (C₁-

C₆)alkoxy-CO-, (C₁-C₆)alkoxy-CO-(C₁-C₆)alkyl, (C₁-C₆)alkoxy-CO-(C₁-C₆)alkoxy(C₁-C₆)alkyl, carbamoyl, mono- or di(C₁-C₆)alkylcarbamoyl, carboxyl and (C₁-C₆)alkyl-S-(C₁-C₆)alkyl,

wherein the (C₃-C₇)cycloalkyl or aryl group is unsubstituted or is substituted with 1 or 2 substituents each independently chosen from hydroxy, (C₁-C₆)alkyl, halogen, (C₁-C₆)alkoxy, NH₂, CN and NO₂, or one of R₃ or R₄ and R₆ together form a bond between the ring atoms to which they are attached;

R₄ is chosen from hydroxy, (C₁-C₆)alkyl, hydroxy(C₁-C₆)alkyl, (C₁-C₆)alkoxy and (C₁-C₆)alkoxy(C₁-C₆)alkyl;

R₅ is chosen from H, hydroxy, (C₁-C₆)alkyl, (C₂-C₆)alkenyl, (C₁-C₆)alkoxy, (C₁-C₆)alkoxy(C₁-C₆)alkyl, (C₃-C₇)cycloalkyl, (C₃-C₇)cycloalkyl(C₁-C₆)alkyl, aryl, aryl(C₁-C₆)alkyl, aryloxy, aryl(C₁-C₆)alkoxy, aryloxy(C₁-C₆)alkyl, aryl(C₁-C₆)alkoxy(C₁-C₆)alkyl, halo(C₁-C₆)alkyl, (C₁-C₆)alkyl-CO-O-, (C₁-C₆)alkyl-CO-O-(C₁-C₆)alkyl, (C₁-C₆)alkoxy-CO-(C₁-C₆)alkoxy(C₁-C₆)alkyl, carbamoyl, mono- or di(C₁-C₆)alkylcarbamoyl, carboxyl and (C₁-C₆)alkyl-S-(C₁-C₆)alkyl,

wherein the (C₃-C₇)cycloalkyl or aryl is unsubstituted or is substituted with 1 or 2 substituents each independently chosen from hydroxy, (C₁-C₆)alkyl, halogen, (C₁-C₆)alkoxy, NH₂, CN and NO₂, or R₄ and R₅ form, together with the carbon ring atoms to which they are attached, a condensed five to seven membered saturated carbocyclic ring substituted with 1, 2, or 3 substituents, R₉,

wherein R₉ are each independently chosen from hydroxy, (C₁-C₆)alkyl, halogen, NH₂, NO₂, (C₃-C₇)cycloalkyl, hydroxy(C₁-C₆)alkyl, halo(C₁-C₆)alkyl, amino(C₁-C₆)alkyl, mono- or di(C₁-C₆)alkylamino, mono- or di(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₁-C₆)alkoxy,

(C₁-C₆)alkoxy(C₁-C₆)alkyl, carboxyl, (C₁-C₆)alkyl-CO-, (C₁-C₆)alkyl-CO-O-, (C₁-C₆)alkoxy-CO-, (C₁-C₆)alkoxy-CO-(C₁-C₆)alkyl, carbamoyl mono- or di(C₁-C₆)alkylcarbamoyl and oxo;

R₆ is chosen from H, hydroxy, (C₁-C₆)alkyl, (C₁-C₆)alkoxy and (C₁-C₆)alkoxy(C₁-C₆)alkyl, or R₆ forms a bond between the ring atom to which it is attached and the ring atom to which R₇ is attached;

R₇ is chosen from H, hydroxy, (C₁-C₆)alkyl, hydroxy(C₁-C₆)alkyl, (C₁-C₆)alkoxy and (C₁-C₆)alkoxy(C₁-C₆)alkyl;

R₈ is H, hydroxy, (C₁-C₆)alkyl, hydroxy(C₁-C₆)alkyl, (C₁-C₆)alkoxy or (C₁-C₆)alkoxy(C₁-C₆)alkyl;

R₁₅ is chosen from H, (C₁-C₆)alkyl, (C₂-C₆)alkenyl, hydroxy(C₁-C₆)alkyl, (C₁-C₆)alkoxy(C₁-C₆)alkyl, hydroxy(C₁-C₆)alkoxy(C₁-C₆)alkyl, halo(C₁-C₆)alkyl, amino(C₁-C₆)alkyl, mono- or di(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₁-C₆)alkyl-CO-, (C₁-C₆)alkyl-CO-O-(C₁-C₆)alkyl, (C₁-C₆)alkoxy-CO-, (C₁-C₆)alkoxy-CO-(C₁-C₆)alkyl, (C₁-C₆)alkoxy-CO-(C₁-C₆)alkoxy(C₁-C₆)alkyl, carbamoyl, mono- or di(C₁-C₆)alkylcarbamoyl and carboxyl;

R₁₆ is chosen from H and (C₁-C₆)alkyl;

R₇ and R₈ are attached to the carbon ring atoms, which are adjacent; and

m is 0 to 2;

or a pharmaceutically acceptable salt or ester thereof.

41. (New) The compound according to claim 40, wherein X is O.

42. (New) The compound according to claim 40, wherein X is S.

43. (New) The compound according to claim 40, wherein R₃ is chosen from hydroxy, (C₁-C₆)alkyl, hydroxy(C₁-C₆)alkyl, (C₁-C₆)alkoxy(C₁-C₆)alkyl, (C₁-C₆)alkoxy-CO-

and (C₁-C₆)alkyl-CO-O-(C₁-C₆)alkyl, and R₄ chosen from is (C₁-C₆)alkyl and hydroxy(C₁-C₆)alkyl.

44. (New) The compound according to claim 40, wherein R₃ is chosen from hydroxy, hydroxy(C₁-C₆)alkyl, and (C₁-C₆)alkoxy(C₁-C₆)alkyl, and R₄ is (C₁-C₆)alkyl.

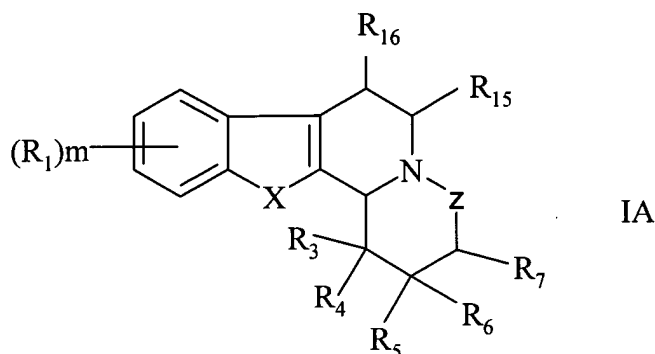
45. (New) The compound according to claim 40, wherein R₄ and R₅ form, together with the carbon ring atoms to which they are attached, a condensed six membered saturated carbocyclic ring.

46. (New) The compound according to claim 40, wherein the compound is 1 α -Methyl-1,3,4,5,6,11b-hexahydro-2H-11-oxa-4a-aza-benzo[a]fluoren-1-ol, (1 α -Methyl-1,3,4,5,6,11b β -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluoren-1-yl)-methanol, (-)-(1 α -Methyl-1,3,4,5,6,11b β -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluoren-1-yl)-methanol, (+)-(1 α -Methyl-1,3,4,5,6,11b β -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluoren-1-yl)-methanol, 1 α -Isopropyl-1,3,4,5,6,11b-Hexahydro-2H-11-oxa-4a-aza-benzo[a]fluoren-1-ol, 1 α -Ethyl-1,3,4,5,6,11b β -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluoren-1-ol, (1 α -Ethyl-1,3,4,5,6,11b β -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluoren-1-yl)-methanol, (1-Hydroxymethyl-1,3,4,5,6,11b-hexahydro-2H-11-oxa-4a-aza-benzo[a]fluoren-1-yl)-methanol, 1-Methoxymethyl-1 α -methyl-1,3,4,5,6,11b β -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluorene, (-)-1-Methoxymethyl-1 α -methyl-1,3,4,5,6,11b β -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluorene, (+)-1-Methoxymethyl-1 α -methyl-1,3,4,5,6,11b β -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluorene, 1 α -Methyl-1,3,4,5,6,11b α -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluorene-1-carboxylic acid ethyl ester, 1-Ethoxymethyl-1 α -methyl-1,3,4,5,6,11b β -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluorene, (1 α -Methyl-1,3,4,5,6,11b α -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluoren-1-yl)-methanol, (-)-(1 α -

Methyl-1,3,4,5,6,11b α -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluoren-1-yl)-methanol, (+)-(1 α -Methyl-1,3,4,5,6,11b α -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluoren-1-yl)-methanol, 1 α -Ethyl-1,3,4,5,6,11b α -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluorene-1-carboxylic methyl ester, 1-Methoxymethyl-1 α -methyl-1,3,4,5,6,11b α -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluorene, (-)-1-Methoxymethyl-1 α -methyl-1,3,4,5,6,11b α -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluorene, (+)-1-Methoxymethyl-1 α -methyl-1,3,4,5,6,11b α -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluorene, (1 α -Ethyl-1,3,4,5,6,11b α -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluorene-1-yl)-methanol or acetic acid 1 α -Methyl-1,3,4,5,6,11b β -hexahydro-2H-11-oxa-4a-aza-benzo[a]fluoren-1-ylmethyl ester.

47. (New) The pharmaceutical composition comprising at least one compound according to claim 1 and a pharmaceutically acceptable diluent, carrier and/or excipient.

48. (New) A method for the treatment of a disease or condition where an antagonist of the alpha-2C adrenoceptor is indicated to be useful, comprising administering to a patient in need of such treatment an effective amount of a compound of formula IA:



wherein,

X is O or S;

Z is -CHR₈-;

R₁ is chosen from hydroxy, (C₁-C₆)alkyl, (C₁-C₆)alkoxy, halogen, halo(C₁-C₆)alkyl, (C₁-C₆)alkoxy-CO-, CN, NO₂, NH₂, mono- or di(C₁-C₆)alkylamino, and carboxyl;

R₃ is chosen from hydroxy, (C₁-C₆)alkyl, (C₂-C₆)alkenyl, hydroxy(C₁-C₆)alkyl, (C₁-C₆)alkoxy, (C₁-C₆)alkoxy(C₁-C₆)alkyl, hydroxy(C₁-C₆)alkoxy(C₁-C₆)alkyl, (C₃-C₇)cycloalkyl, (C₃-C₇)cycloalkyl(C₁-C₆)alkyl, aryl, aryl(C₁-C₆)alkyl, aryloxy, aryl(C₁-C₆)alkoxy, aryloxy(C₁-C₆)alkyl, aryl(C₁-C₆)alkoxy(C₁-C₆)alkyl, halo(C₁-C₆)alkyl, NH₂, amino(C₁-C₆)alkyl, mono- or di(C₁-C₆)alkylamino, mono- or di(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₁-C₆)alkyl-CO-, (C₁-C₆)alkyl-CO-O-, (C₁-C₆)alkyl-CO-O-(C₁-C₆)alkyl, (C₁-C₆)alkoxy-CO-, (C₁-C₆)alkoxy-CO-(C₁-C₆)alkyl, (C₁-C₆)alkoxy-CO-(C₁-C₆)alkoxy(C₁-C₆)alkyl, carbamoyl, mono- or di(C₁-C₆)alkylcarbamoyl, carboxyl and (C₁-C₆)alkyl-S-(C₁-C₆)alkyl,

wherein the (C₃-C₇)cycloalkyl or aryl group is unsubstituted or is substituted with 1 or 2 substituents each independently chosen from hydroxy, (C₁-C₆)alkyl, halogen, (C₁-

C₆)alkoxy, NH₂, CN and NO₂, or one of R₃ or R₄ and R₆ together form a bond between the ring atoms to which they are attached;

R₄ is chosen from hydroxy, (C₁-C₆)alkyl, hydroxy(C₁-C₆)alkyl, (C₁-C₆)alkoxy and (C₁-C₆)alkoxy(C₁-C₆)alkyl;

R₅ is chosen from H, hydroxy, (C₁-C₆)alkyl, (C₂-C₆)alkenyl, (C₁-C₆)alkoxy, (C₁-C₆)alkoxy(C₁-C₆)alkyl, (C₃-C₇)cycloalkyl, (C₃-C₇)cycloalkyl(C₁-C₆)alkyl, aryl, aryl(C₁-C₆)alkyl, aryloxy, aryl(C₁-C₆)alkoxy, aryloxy(C₁-C₆)alkyl, aryl(C₁-C₆)alkoxy(C₁-C₆)alkyl, halo(C₁-C₆)alkyl, (C₁-C₆)alkyl-CO-O-, (C₁-C₆)alkyl-CO-O-(C₁-C₆)alkyl, (C₁-C₆)alkoxy-CO-(C₁-C₆)alkoxy(C₁-C₆)alkyl, carbamoyl, mono- or di(C₁-C₆)alkylcarbamoyl, carboxyl and (C₁-C₆)alkyl-S-(C₁-C₆)alkyl,

wherein the (C₃-C₇)cycloalkyl or aryl is unsubstituted or is substituted with 1 or 2 substituents each independently chosen from hydroxy, (C₁-C₆)alkyl, halogen, (C₁-C₆)alkoxy, NH₂, CN and NO₂, or R₄ and R₅ form, together with the carbon ring atoms to which they are attached, a condensed five to seven membered saturated carbocyclic ring substituted with 1, 2, or 3 substituents, R₉,

wherein R₉ are each independently chosen from hydroxy, (C₁-C₆)alkyl, halogen, NH₂, NO₂, (C₃-C₇)cycloalkyl, hydroxy(C₁-C₆)alkyl, halo(C₁-C₆)alkyl, amino(C₁-C₆)alkyl, mono- or di(C₁-C₆)alkylamino, mono- or di(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₁-C₆)alkoxy, (C₁-C₆)alkoxy(C₁-C₆)alkyl, carboxyl, (C₁-C₆)alkyl-CO-, (C₁-C₆)alkyl-CO-O-, (C₁-C₆)alkoxy-CO-, (C₁-C₆)alkoxy-CO-(C₁-C₆)alkyl, carbamoyl mono- or di(C₁-C₆)alkylcarbamoyl and oxo;

R₆ is chosen from H, hydroxy, (C₁-C₆)alkyl, (C₁-C₆)alkoxy and (C₁-C₆)alkoxy(C₁-C₆)alkyl, or R₆ forms a bond between the ring atom to which it is attached and the ring atom to which R₇ is attached;

R₇ is chosen from H, hydroxy, (C₁-C₆)alkyl, hydroxy(C₁-C₆)alkyl, (C₁-C₆)alkoxy and (C₁-C₆)alkoxy(C₁-C₆)alkyl;

R₈ is H, hydroxy, (C₁-C₆)alkyl, hydroxy(C₁-C₆)alkyl, (C₁-C₆)alkoxy or (C₁-C₆)alkoxy(C₁-C₆)alkyl;

R₁₅ is chosen from H, (C₁-C₆)alkyl, (C₂-C₆)alkenyl, hydroxy(C₁-C₆)alkyl, (C₁-C₆)alkoxy(C₁-C₆)alkyl, hydroxy(C₁-C₆)alkoxy(C₁-C₆)alkyl, halo(C₁-C₆)alkyl, amino(C₁-C₆)alkyl, mono- or di(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₁-C₆)alkyl-CO-, (C₁-C₆)alkyl-CO-O-(C₁-C₆)alkyl, (C₁-C₆)alkoxy-CO-, (C₁-C₆)alkoxy-CO-(C₁-C₆)alkyl, (C₁-C₆)alkoxy-CO-(C₁-C₆)alkoxy(C₁-C₆)alkyl, carbamoyl, mono- or di(C₁-C₆)alkylcarbamoyl and carboxyl;

R₁₆ is chosen from H and (C₁-C₆)alkyl;

R₇ and R₈ are attached to the carbon ring atoms, which are adjacent; and

m is 0 to 2;

or a pharmaceutically acceptable salt or ester thereof.

49. (New) The method according to claim 48, wherein the disease or condition is chosen from a mental disorder propagated by stress, Parkinson's disease, depression, schizophrenia, attention deficit hyperactivity disorder, post-traumatic stress-disorder, anxiety disorders, obsessive compulsive disorder, Tourette's syndrome, blepharospasm and other focal dystonias, temporal lobe epilepsy with psychosis, drug-induced psychosis, Huntington's disease, disorders caused by fluctuation of the levels of sex hormones, and panic disorder.